



Agenda Item 4: Assessment of operational requirements to determine the implementation of improvements in communications, navigation and surveillance (CNS) capabilities for operations in route and terminal area

STATUS OF SITA AMHS GATEWAY INTERCONNECTIONS

(Presented by SITA)

SUMMARY

This Information Paper aims to inform the SAM/IG/19 on the progress made in SITA AMHS Gateway inter-connections.

1. Introduction

1.1 This Information Paper aims to inform the SAM/IG/19 on the progress made in SITA AMHS Gateway inter-connections and preparations for continuation of migration to AMHS in closed coordination with the AMHS Gateway COM Centers and AMC.

2. Discussion

2.1 The progress status for Interoperability Testing (IOT) and Pre-Operational Testing (POT) at the time of writing this Information Paper (IP) on the 28th of April 2017 is as follows.

Singapore	<ul style="list-style-type: none">• IOT Completed, document finalized.• POT Completion expected within days, document to be finalized.• Preparation for commissioning in coordination with AMC, Thailand and ICAO APAC region.
Thailand	<ul style="list-style-type: none">• POT completed in 2016• Preparation for commissioning in coordination with AMC, Singapore and ICAO APAC region.
Australia	<ul style="list-style-type: none">• COM Center is planning to resume contact for connectivity testing.
South Africa	<ul style="list-style-type: none">• IOT document sent to COM Center.• Network access issues are under work on COM Center side.

	<ul style="list-style-type: none"> IOT to be scheduled as soon as connection issues are resolved and the updated IOT document is received.
Lebanon	<ul style="list-style-type: none"> IOT Completed. POT Completed. Pending the 2nd AMHS connection completion in MID region prior commissioning in coordination with AMC, COM Centers and ICAO MID region.
Qatar	<ul style="list-style-type: none"> IOT document sent to Qatar COM Center. Network access issues are under work on COM Center side. IOT to be scheduled as soon as connection issues are resolved and the updated IOT document is received.
Jordan	<ul style="list-style-type: none"> IP deployment and connection completed. IOT document is communicated. IOT should start shortly.
Brazil	<ul style="list-style-type: none"> Network deployment is completed. IP test completed. IOT is to start on the 10th of May.
Argentina	<ul style="list-style-type: none"> Network connection completed. IOT document completed. IOT to be scheduled.
USA	<ul style="list-style-type: none"> Request communicated to start preparations and the required set up.

2.2 Currently all SITA exchanges within ICAO EUR countries and countries connected to EUR region via AMHS are through AMHS active connections with Germany and Switzerland completed in 2016.

2.3 All AMHS IOT and POT documents proposed for all SITA AMHS interconnections are the same as the ones created for our interconnection tests in ICAO EUR region. This practice ensures completeness and similar practice through the defined comprehensive test cases to facilitate interoperability.

2.4 SITA has completed AMHS IOT and POT with Thailand in 2016 and recently with Singapore. This meets the regional resiliency requirements prior to commissioning during the coming weeks within APAC region in close coordination with AMC and related ANSPs.

2.5 The AMHS IOT and POT are completed with Lebanon. Network connection is established with Jordan and expects AMHS IOT and then POT to start shortly. The network connection to Qatar is available pending COM Center availability to start IOT. This should allow migration to AMHS within ICAO MID region during 3Q2017.

2.6 Network connection with Argentina is completed. IOT document is established pending COM Center availability for AMHS IOT.

2.7 Network connection with Brazil is completed. IOT document is established and testing is scheduled to start on the 10th of May 2017.

2.8 We expect IOT and POT completion with Brazil and Argentina prior to migration to AMHS within ICAO SAM region during 3Q2017 depending on the COM Centers availability.

2.9 IOT and POT with South Africa is expected to start during early 4Q2017. This however depends on the COM Center availability.

2.10 The draft AMHS IOT documents are also communicated to United States and France waiting for the proposed updates and to discuss the required network connection and test plan.

2.11 The involvement and actions taken by AMC have been and remain key in coordination with ANSPs for the necessary addressing and routing alignments and supervision during every regional migration.

2.12 To assist transition planning information and advice to COM Centres impacted with implementation of AMHS SITA Gateway on the AFS Network a document is prepared by AMC and ICAO EUR region AFSG-Operations Group to provide guidance and AMC support to the COM centres to enable smooth integration of SITA Gateway. This document is attached as annex to this Information Paper.

2.13 SITA in keen to work closely with the AMHS gateway COM Centers and AMC to coordinate the continuation of migration to AMHS, initially with the flows related to the AMHS Gateway COM Centers, and progressively for the other underlying COM Centers through the AMHS gateway COM Center. This practice follows the agreed architecture and regional interconnection topologies.

3. Action by the Meeting

3.1 The SAM/IG/19 is invited to note the contents of this Information Paper and provide comment as appropriate.

ANNEX

SITA Gateway Transition Planning

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SITA Gateway Transition Planning

Introduction

This guide provides planning, transition information and advice to COM Centres impacted with implementation of AMHS SITA Gateway on the AFS Network. It provides AMC support to the COM centres to enable smooth integration of SITA Gateway. To allow the AMC Operator to successfully coordinate the activity, important steps and information are required to be followed.

In the ICAO Memorandum sent to all ICAO Regional CNS Officers, it states that the 'ATS Messaging Management Centre (AMC) will coordinate the activity' and that 'each COM Centre shall take actions.' Whilst the AMC Operator cannot mandate the steps in this guide, it requests the cooperation of COM Centres to follow the steps allowing a smooth transition of new SITA AMHS Gateways into Global operations. The risks of not coordinating the transition activity include message looping, message loss and NDRs throughout the global AMHS network.

ICAO Memorandum 11th January 2016

Reference: EUR/NAT 16-0013.TEC (FIC/SAN) - 11 January 2016

'The work with respect to the introduction of the SITA PRMD and related routings will be coordinated out by the ATS Messaging Management Centre (AMC)² (Ref.: State Letter AN 7/49.1-09/34, 14 April 2009 refers), however to ensure that such a Global activity has the correct level of engagement, Regional coordination is required. Please note that each State/COM Centre is affected and shall take actions, regardless of whether the COM Centre currently supports an AFTN to SITA connection. Every COM Centre will be required to route SITA AMHS messages to their Regional SITA AMHS gateway and validate the User Addresses in the AMC for their State.'

Planning

With respect to the ICAO Memorandum, this guide should be followed by COM Centres impacted with implementation of SITA Gateway. Importantly, a point of contact for the activity should be appointed. This will be a representative from a COM Centre, ideally the Regional Focal Point.

The appointed contact will be known as the **Transition Manager** who will inform, coordinate with the Regional COM Centres and coordinate with the AMC responsible for the overall integration activity.

Prior to the activity, Transition Manager having coordinated with SITA will contact the AMC Operator to notify the intention of integrating a new SITA Gateway COM Centre by providing the following information:

- Contact Details for who is managing the transition of the SITA Gateway into operations (Transition Manager).
- The planned AIRAC date the transition will occur.
- Confirmation that testing has been completed at the Gateway with SITA.
- The status (if required) of the SITA Gateway for the Region once in operation: Primary/Alternate.

Accordingly the AMC will inform ICAO Regional CNS Officer, all Regional Focal Points and impacted Regional COM Centres regarding the planned activity and the Transition Manager who will be coordinating the activity. Following the acknowledgement by the AMC Operator, the following planning activity will be carried out by the Transition Manager.

Confirm that the COM Centres are ready for the activity

The Transition Manager will coordinate with each COM Centre in the Region for the acknowledgement of the following information:

- Confirm COM Centre access to the AMC Application. If not please register with the AMC <https://extra.eurocontrol.int>.
- Confirm that all contact details in the Network Inventory are complete and up to date.
- Confirm COM Centre validation of the AMHS User Address list.
- Confirm the coordinated Routing of the PRMD = SITA to the new SITA Gateway*.

**This may require coordination with adjacent COM Centres if the SITA Gateway is more than one hop in the network.*

Once the above information has been provided by each COM Centre, the following 'Planning Acknowledgement Table' must be completed by the Transition Manager and submitted to the AMC Operator to confirm Regional Acknowledgement. **Additionally, the routing arrangements of the COM Centres must be provided to allow the AMC Operator to create the Routing tables.**

For the transition to be coordinated effectively, the AMC must have all of the required information at least one AIRAC Cycle before the transition date.

Planning Acknowledgement Table

COM Centre	Contact	Tel.	E-mail	ACK Date
<i>e.g. WSSS</i>	<i>Mr. Smith</i>	<i>+1123456789</i>	<i>mr.smith@comcentre.org</i>	<i>9/12/16</i>

By analysing the planning ACK table and provided routing arrangements the AMC will inform the Transitional Manager, Regional CNS Officer, Regional Focal Points and all impacted COM Centres to **confirm** the activity.

Transition

Carry out an AMC cycle to integrate SITA Gateway

Transition will occur on the agreed AIRAC date for the Region. During the AIRAC cycle leading to the transition date, the following tasks will be completed:

- The agreed transition date will be published on the AMC Bulletin Board by the AMC Operator.
- The AMC Operator will create the Routing tables in the AMC Application to correctly reflect the routing of the PRMD SITA for each COM Centre.
- Each COM Centre will check the AMC data including routing and user address list.
- The following Transition Acknowledgement Table must be completed and sent to the AMC Operator by the Transition Manager **by Day 21** (ACK/NACK) of the AIRAC cycle.

Transition Acknowledgement Table

COM Centre	Contact	AFTN	E-mail	Check routing	Check address list	ACK Date
<i>e.g. WSSS</i>	<i>Mr. Smith</i>	<i>WSSSABCD</i>	<i>mr.smith@comcentre.org</i>	✓	✓	<i>9/12/16</i>

- By analysing received Transition Acknowledgement Table, the AMC Operator will confirm that the activity will continue as planned if all COM Centres acknowledge the process. On Day 25 of the AIRAC, the AMC Bulletin Board will be updated to confirm that the activity is taking place. The Transition Manager will inform each COM Centre in the Region by e-mail and AFTN/AMHS message.
- On Day 28 after 11:00 UTC, the AMC Operator will confirm that each COM Centre has implemented the AMHS User Address list and routing the SITA PRMD to the SITA Gateway. This confirmation will also be sent to the Regional COM Centres, the ICAO Regional CNS Officer, Regional Focal Point by the AMC.